

► London Bridge Station

Learn how a Kenwood NEXEDGE® system helps Network Rail to keep the station operating safely and efficiently.

By 2018, some 55 million people a year will transit across the concourse of London Bridge Station.



Already one of the busiest rail transport hubs in the UK, London Bridge Station is preparing itself for a 10% increase in passengers by 2018.

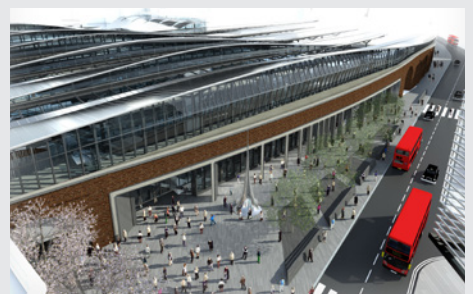
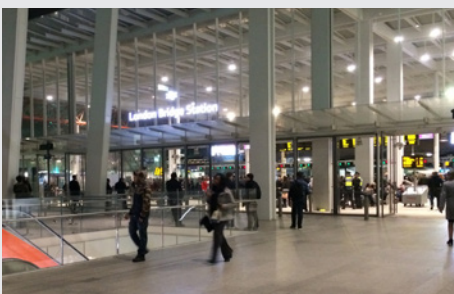
London Bridge mainline railway station is one of the oldest in the UK and has been the subject of numerous rebuilding and improvement programmes in its 178 year history.

The current development of the station will result in a concourse covering 10,500 m² in anticipation of managing the 55 million passengers likely to be transiting through it when completed in 2018.

The station is operated by Network Rail, the authority which owns and operates almost all of the rail infrastructure in Great Britain and directly manages seventeen of the biggest and most important railway stations (it also owns most of the other 2,500 stations in Great Britain which are managed by various Train Operating Companies).

Located in the vibrant London Bridge Quarter at the foot of The Shard, the tallest building in the European Union, London Bridge Station is minutes from the UK's financial capital and serves commuters and visitors to the city with connections to and from south east London, the south coast of England, through services to other London stations and north to Bedford.

The project will effectively flatten the existing building to its Victorian foundations to create a new station with a concourse larger than the pitch at Wembley Stadium which will sit under the tracks and sixteen extended platforms – not a simple feat in such a busy part of a capital city and made even more challenging as the station will be kept open throughout the process.



As part of the £6.5 billion London Thameslink project which will increase rail capacity, frequency and connections running north to south through the centre of London, the station is undergoing a major redevelopment programme which started in 2013 and is scheduled for completion in 2018.

The development is now in full swing with an 'army' of contractors are operating in and around the station 24 hours a day.

Keeping 300,000 passengers from 2,500 trains each day safe and informed.

The Network Rail team managing safety, security and delivering operational efficiency at London Bridge Station is led by Station Manager Denis Kirk who is supported by five Station Shift Managers operating in three shifts six days a week. The station is only closed for three hours each day between 1am and 4am for cleaning, maintenance and repairs.

The station team took delivery of their new Kenwood NEXEDGE® digital radio communications system during 2013, ahead of major station redevelopment works commencing. The design of the Distributed Antenna System (DAS) to deliver 100% coverage throughout the station, both above and below the ground, was carried out by Affini Technology Ltd who, as an approved Kenwood partner, also installed, programmed and commissioned the NEXEDGE® digital radio system comprising repeaters and hand portable radios.



Dave Baldwin, Station Shift Manager knows only too well the complexities of managing a station the size of London Bridge and with his team, shoulders the additional burden of keeping passengers and staff safe, maintaining security, health and safety and ensuring operational efficiency during its widespread redevelopment.

Dave comments: "Along with my fellow Station Shift Managers Antony Faircloth, Steven Sharkey, Ieuan Haliday and Gordon Glen, my job is to keep this station running smoothly, helping passengers to transit through to and from their trains quickly and with the minimum of hassle, but with 6,500 people per minute passing through the station during peak commuting hours things can and do go wrong, whether it involves delayed arrivals and departures, illness, crime, anti-social behaviour, suspicious packages or even the occasional stray dog. One of our key concerns therefore is to safely control the flow of passengers and manage any build up on the concourse, with trains arriving every 39 seconds, it wouldn't take long to fill the station and if that happens, everything comes to a standstill and increases the risk of accident and injury".

"... the 100% radio coverage throughout the station means that our staff all feel much safer – no more radio black spots..."

Dave's team work closely with the staff employed by the train operating companies at the station to anticipate and respond to events and incidents. He continues: "All of the Network Rail and train operating companies staff based at the station are equipped with radios, so too are the British Transport Police officers who can monitor our channels to keep informed on situations. The radios are our primary communications tool and I can say without fear of contradiction that all staff feel much safer because the new NEXEDGE® system provides 100% coverage of the station, something the previous analogue system just wasn't able to do".



“Flexibility is key to maintaining a good passenger experience in our highly dynamic environment”

The construction work taking place at the station frequently calls for changes to be made to the layout and necessitates the temporary closure and relocation of platforms and public areas to facilitate works. Dave reports: “Many of our passengers are daily commuters who are almost on autopilot from the moment they enter or leave the station. Helping them manage their transit through the station and breaking established habits can be difficult at times especially when they lose their points of reference, so at times our staff are having to act as travel guides and information centres. Alongside our CCTV cameras and passenger counting system, the radios are proving invaluable in keeping our staff apprised at all times on situations as they arise. Our aim is to respond to an incident in any part of the station within 40 seconds and this would be impossible if we had coverage blackspots or congestion on the radio system. The team at Affini are on site as needed to carry out coverage surveys whenever any major changes take place and to relocate or augment antennas and repeaters as required when new structures are completed – as you’d expect, flexibility is key to maintaining a good passenger experience in our highly dynamic environment”.

The NEXEDGE® digital conventional system installed at the station comprises one base station, two repeaters and 120 hand-portable radios – and is programmed to operate in both digital and analogue modes. Two channels are in use, Channel 1 digital

for Network Rail Reception, Security and Customer Services teams, South Eastern (First Capital Connect) and Initial Cleaners staff while Channel 2 analogue is used by Southern staff to prevent congestion, however in the quieter period from 11pm in the evening all communication takes place on Channel 1.

System expansion plans

By the time the station redevelopment is completed, it will be a major part of the London Bridge quarter with direct links to The Shard, the new bus terminal and London Bridge underground station and the radio system will have been considerably expanded to include 140 retail units, coffee shops, fast food outlets, 16 platforms and a vast concourse on a single communications platform. Don MacLeod, affini Pre-sales consultant, comments: “The Kenwood NEXEDGE® system provides a flexible communications infrastructure to grow with the stations’ needs from additional channels and talk groups to extended coverage and delivers against the design specification. It performs well so we’re happy and Network Rail is happy”.

Dave Baldwin concludes: “We have had no coverage issues anywhere in the station with the NEXEDGE® system and it performs exactly as it should...”

... I’d never leave my office without my NEXEDGE® radio – that’s how important it is to me and the safe and efficient running of this station”.



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